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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,238	01/29/2001	Mitsuo Saeki	1080. 1090/JDH	6797

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EXAMINER

STERRETT, JEFFREY L

ART UNIT PAPER NUMBER

2838

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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770,238

EXAMINER

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DATE MAILED: 12/1/03

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 2-7, 9-14, 16-21, 23-28, & 30-40 is/are pending in the application.
- ☐ Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 2-7, 9-14, 16-21, 23-28, & 30-40 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☒ The proposed drawing correction, filed on 10/22/01 & 5/29/03 is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 18
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. The proposed drawing corrections filed on October 22, 2001 and May 29, 2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 2-4, 7, 9-11, 14, 16-18, 21, 23-25, 28, 30-32, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker et al (US 4,641,231).

Walker et al discloses a switching regulator comprising a main switch (G1), a synchronous switch (G2), and a simultaneous switch conduction detection circuit (30+ and 32+).

5. Claims 3, 4, 7, 9-11, 14, 16-18, 21, 24, 25, 28, 31, 32, and 35-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilcox (US 5,408,150).

Wilcox discloses a switching regulator comprising a main switch (21), a synchronous switch (22), and a simultaneous switch conduction detection circuit (32).

6. Claim 3, 4, 6, 7, 9-11, 13, 14, 16-18, 20, 21, 24, 25, 27, 28, 31, 32, and 34-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheney (US 5,502,610).

Cheney discloses a switching regulator comprising a main switch (16H), a synchronous switch (16L), and a simultaneous switch conduction detection circuit (27H+ and 27L+).

7. Claims 2, 23, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilcox or Chaney in combination with Walker et al.

Wilcox and Chaney both teach a switching regulator as recited by claims 2, 3, 9, 10, 23, 24, 30, 31, and 38 except for utilizing a display unit. Walker et al teaches a switching regulator utilizing a display unit responsive to fault signals (52 and 56) as old and known in the art at the

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time of the invention (see line 64 of column 5 to line 7 of column 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the switching regulator of Wilcox or Chaney by utilizing a display unit in order to alert the user of the switching regulator of a switching regulator fault as taught by Walker et al.

8. Claims 5, 12, 19, 26, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chaney in combination with Suzuki et al (US 5,675,482).

Chaney teaches a switching regulator as recited by claims 5, 12, 19, 26, and 33 except for utilizing current direction detection. Suzuki et al teaches utilizing current direction detection (17 and 27) in power converters was an old and known expedient in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified current detectors of the switching regulator of Chaney by utilizing current direction detection as taught by Suzuki et al in order to determine whether the switch is sourcing or sinking current.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sterrett whose telephone number is (703) 308-1632. The examiner can normally be reached on Monday through Thursday from 8:00 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on (703) 308-1680. The fax phone number for this Art Unit is (703) 305-7723 and the fax phone number for this Group is (703) 305-3431 or (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

jls

November 26, 2003

Jeffrey L. Sterrett

Primary Examiner

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